

CLAIMS

1. A sampling kit having:
a sampling device with a sampling head and a
5 handle;
a container for receiving the sampling head; and,
optionally, a closure for closing an open end of
the container,
wherein the container or closure has engagement means
10 arranged so that the sampling head is detachable from the
handle by engaging the sampling head with the engagement
means and moving the handle with respect to the
engagement means.
- 15 2. A sampling kit according to claim 1 wherein, in
the sampling device, the handle has a distal end and a
proximal end, the proximal end being for handling by a
user and the sampling head being detachably supported
around a support portion at the distal end of the handle.
- 20 3. A sampling kit according to claim 2 wherein the
sampling head is connected to the support portion by at
least one frangible connection extending therebetween.
- 25 4. A sampling kit according to any claim 2 or claim 3
wherein the sampling head is at least partially hollow so
that, before the sampling head is detached from the
handle, there is a space suitable for sample retention
between an internal surface of the sampling head and a
30 surface of the support portion.

5. A sampling kit according to any one of claims 1-4 wherein the sampling head is formed so that, in use, once detached from the handle, it presents an aperture.
- 5 6. A sampling kit according to claim 5 wherein, in use, the aperture becomes enlarged compared to the cross-sectional area of the handle during detachment of the sampling head from the handle.
- 10 7. A sampling kit according to any one of claims 1-6 wherein the sampling head is splittable into two or more segments, thereby allowing exposure for analysis of sampled material held inside the sampling head.
- 15 8. A sampling kit according to claim 7 wherein, in use, the segments of the sampling head which split apart abut the inner surface of the container.
- 20 9. A sampling kit according to any one of claims 1-8 wherein the sampling head is formed of a material which substantially does not absorb DNA and/or water.
10. A sampling kit according to any one of claims 1-9 wherein the engagement means is formed at a surface of
25 the closure.
11. A sampling kit according to claim 10 wherein the engagement means has a tapering shape to assist, in use, detachment and/or segmentation of the sampling head.
- 30 12. A sampling kit according to claim 10 or claim 11 wherein the handle of the sampling device is slidable

within the closure, to enable detachment of the sampling head by the engagement means.

13. A sampling kit according to claim 12 wherein the
5 closure includes an aperture in which the handle of the sampling device is slidable the aperture being closable substantially to seal the closure when the handle is removed from the closure.
- 10 14. A sampling kit according to any one of claims 10-13 wherein the closure includes an adapter and sealing means shaped to cooperate with the adapter substantially to seal the adapter.
- 15 15. A sampling kit according to claim 14 wherein the adapter is connectable to the container at the open end of the container.
16. A sampling kit according to claim 14 or claim 15
20 wherein the engagement means is formed at a surface of the adapter.
17. A sampling kit according to claim 16 wherein the
25 engagement means is an aperture through the adapter, shaped to allow the sampling head through the adapter in a first rotational position and to prevent the sampling head passing through the adapter in a second rotational position.
- 30 18. A sampling kit according to any one of claims 14-17 wherein the sampling head is detachable from the handle via relative rotational movement between the engagement means and the sampling head.

19. A sampling kit according to any one of claims 14-18 wherein the sealing means is attachable to the container via attachment means independent of the cap.
- 5 20. A sampling kit according to any one of claims 1-9 wherein the engagement means is formed on an internal surface of the container.
- 10 21. A sampling kit according to claim 20 wherein the engagement means is a lip, step, barb or slot formed on the internal surface of the container and shaped and/or directed to allow the sampling head to pass into the container in an entry direction, but not in an exit
- 15 direction, to detach the sampling head from the handle.
22. A sampling kit according to claim 21 wherein the engagement means comprises a tapering internal cross-section of the container.
- 20 23. A sampling kit according to any one of claim 1-22 wherein the container is suitable for multiple well testing, such as part of a 24, 32, 48, 96, 384 or 1536 well plate or is suitable for use in such a well plate or
- 25 microplate.
24. Use of a sampling kit according to any one of claims 1-23 to take a biological sample from a subject or location, with the optional further steps of storing
- 30 and/or processing the sample.
25. Use of a sampling device to take a biological sample from a subject, the sampling device having a

handle and a detachable sampling head, the use including the step of engaging the sampling head with engagement means of a container or of an associated closure and moving the handle with respect to the engagement means to
5 detach the sampling head from the handle, with the optional further steps of storing and/or processing the sample.

26. A use according to claim 24 or claim 25 wherein
10 the sampling head is detached from the handle by manipulating the handle to force the sampling head against the engagement means and, optionally, subsequently removing the handle.

15 27. A use according to claim 26 wherein the sampling head is rotated from a first, entry rotational position to a second, detachment configuration, relative to the engagement means, before detachment of the sampling head from the handle.

20 28. A use according to claim 26 or claim 27 wherein the sampling head deforms during engagement with the engagement means, thereby breaking a connection between the sampling head and the handle.

25 29. A use according to claim 28 wherein subsequent movement of the handle with respect to the sampling head causes the sampling head to split or partially split into segments.

30 30. A use according to any one of claims 23-29 wherein detachment of the sampling head from the handle occurs

during withdrawal of the handle from the container,
engaging the sampling head on the engagement means.

31. A use according to any one of claims 23-29 wherein
5 detachment of the sampling head from the handle occurs
during entry of the sampling device into the container.

32. A use according to any one of claims 23-31 wherein
the detachment of the sampling head from the handle
10 occurs via movement of the sampling device substantially
along a principal axis of the container.

33. A sampling kit according to any one of claims 1-23
further including processing means for initiating sample
15 processing of sample collected, the processing means
being locatable in the container.

34. A sampling kit having:
a sampling device with a sampling head and a
20 handle;
a container for receiving the sampling head;
processing means for initiating sample processing
of sample collected, and,
optionally, a closure for closing an open end of
25 the container,
wherein the processing means is locatable in the
container.

35. A sampling kit according to claim 33 or claim 34
30 wherein the processing means is an absorbent cover means
to allow, in use, sample held by the sampling head to
transfer to the cover means.

36. A sampling kit according to claim 35 wherein the absorbent material is an impregnated paper or fabric which is capable of yielding amplifiable nucleic acid from suitable biological material, such as buccal cells.

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37. A sampling kit according to claim 35 or claim 36 wherein the absorbent covering means is configurable to be interposed between the sampling head and an inner surface of the container.

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38. A sampling kit according to claim 33 or claim 34 wherein the processing means is capable of initiating or performing cell lysing on sample held, in use, in the container.

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39. Use of a sampling kit according to any one of claims 33-38 to take a biological sample from a subject or location, with the optional further steps of storing and/or processing the sample.

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40. A use according to any one of claims 24-32 or claim 36 further including the step of carrying out at least one of a DNA/RNA assay, forensics, chemical, biological, microbiological sampling, or cleaning validation of process equipment to be used for pharmaceuticals, foods, proteins or biological species.

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